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LAYTON ATARI COMPUTER ENTHUSIASTS

LACE

400 800 600XL 800XL 1200XL 65XE 130XE 520ST 1040ST MEGA ST

LACE, The monthly publication for the Atari Computer owner. Designed to assist the Atari user in the use and enjoyment of their ATARI computer and accessories.

All articles may be submitted to the editor

EDITOR'S ADDRESS:

Don Smith
174 S. Lakeview Dr.
Clearfield, Ut. 84015
(801) 773-5995

EXECUTIVE COMMITTEE

Vice	David Young	776-6273
Sec.	Kathi Higdon	546-4254
Libr.	Mike Cardon	544-5875
ED.	Don Smith	773-5995

Asst ED Kare

President's Avenue

The Main Street of L.A.C.E.
Home of Stan Mann

What is a Computer Specialists???? That's a question I bet you have all been asking yourselves at one time or another. Well after quite a few nirvana of extensive research, I have developed an explanation that I hope all of you will appreciate.(not really, I found this floating around at work and copied it) A Computer Specialists is one who passes himself off as an exacting expert on the basis of being able to turn out, after innumerable debugs, an infinite series of incomprehensive answers calculated with micrometric precision from vauge assumptions based on debatable figures taken from inconclusive documents of problematical accuracy by persons of dubious reliability and questionable mentality for the purpose of annoying and confounding a hopelessly defenseless department that was unfortunate enough to have asked for the information in the first place!!!!!!

Hope that put a little smile on your face. Now back to business. What have we got on the agenda for this months meeting, would you believe it I finally found someone that will give us a CAD DEMO on the ST. Dave has lined up one of the guys from "8 bits Unlimited" to give us a demo on Blazzing Paddles, a kinda Neochrome type application.

Now for the BBS/Modem demo we were planning on giving last meeting, well Dave and I have ran into some problems, we can't get the two to run together and have the BBS running on the ST. You must go thru MA BELL's lines to get the BBS to recognize the call. So here's what we are going to do. Dave and I are going to offer our services and invite everyone/anyone over to MY HOUSE. I've got 2 phone lines, a Michtron BBS, and all the facilities except for an 8 bit Atari and Dave has that and the expertise. So here's what we are offering, we'll supply everything needed for the DEMO all we need from you is to let us know when and how many of you want to attend. So let us know what you want to do, we can even do a GENIE and/or DELPHI demo the same night or arrange it for a different day.

Pres. cont.

Any of you that can't make the meeting and would like to attend give me a call.

We really need everybody to attend this meeting, we have just a few items of CLUB BUSINESS but it's something everyone should input on.

Good news from the ATARI FEST, we made some money. How much you ask? Well come and find out.

What is this I hear from some of the members saying they would like to suspend having the LACE meetings for the summer? I don't know, with the attendance we've had in the last couple meetings, maybe they've got the right idea!!!!!!

.....STAN

MODIFY YOUR AVATEXII

MODEM MODIFICATION PURPOSE

Add Hi-speed carrier detect to become 100% compatible.

PARTS NEEDED:

1.----MC1488 chip-Radio Shack #276-2520 (RS-232 driver)

2.----(2) feet of 20-gauge hook-up wire.

GETTING STARTED:

After opening up the modem, located IC# U30 (located by the RS-232 connector). Take the new IC and fold up all pins EXCEPT #1,7,and 14 of IC #U30.

Now take a wire from pin #2 of the new IC to pin #12 of IC #23 (located just behind the LEDs). Then take a wire from pin #3 of the new IC to pin #12 of the RS-232 connector. Now take your wire to pins #4,5,9,10, and 12, and solder all these pins together (we're making a heat-sink to keep the new chip from overheating).

After you've soldered all these pins together, solder a wire from board ground (of the modem) to these pins. That's it!

To test what you have just completed, take a piece of wire and ground the cathode end (banded side) of the "HS" LED should light, and with a VOM connected to pin 12 on the RS-232 connector, you should read about +8 volts or so.

This mod has been done by David Young on his Avatex 1200 and works fine. If you have any problems please refer all questions to David or myself. ED.

Vice Reports

or from the inside looking out

by david young

Well, it's finally here. The time of year when we all abandon the key board and joy sticks for other activities. It seems that mowing the lawn is a big waste of time. You spend the better part of your saturday cutting, trimming and getting the lawn to look just right, and it just grows back just as long as before. I'd much rather spend my time on my motorcycle leaning into the corners and twisty spots of our canyons.

Stan and I are sorry for the change of plans for last months meeting. We tried with out success to make a BBS talk through a null modem cable. There seems to a problem generating a ring from the terminal programs for the BBS to answer. Any way we failed, but we have not given up on the idea of a BBS demo. We will hold a special meeting for those interested in the subject and will call several bbs to give you an idea of the different types that are operating. More details will be given at the next meeting.

Now for a little news. The Atari 3 and 1/2 drive has been shelved. It seem that the software vendors were reluctant to offer software on two formats. I can see their point. Point two, 360k on a double sided 3 and 1/2 disk is extremely wasteful. So the plans have been revised and a NEW 5 AND 1/4 DOUBLE SIDED, TRUE DOUBLE DENSITY drive will be released soon with the New A-DOS. This info came from the May 1987 issue of Analog Magazine.

This months 8-bit demo will be Blazing Paddles. This is a very nice graphics drawing program. The program will be demoed by the owner of 8 Bits Unlimited. I saw this program demoed at the Imace meeting last week, and I think it deserves close attention from anyone that likes to draw or sketch.

Well enough for now I hear my grass growing. bye

Hardware Review

XEP80 (80-column card)
Atari Corp.
1196 Borregas Avenue
Sunnyvale, CA 94086
(408) 745-2000
$79.95, 16K disk

It's here. Arriving at Antic just as we were about to go to press, the long-promised XEP80 80-column box is being manufactured at the Atari Corp.'s Taiwan manufacturing center and should be available in stores for $79.95 in June.

The XEP80 displays 80 columns and 24 rows of readable text on your screen. On monochrome monitors, this text is razor-sharp. It's also quite readable on a color monitor, though naturally the characters are smaller than standard 40-column Atari text. Either way, the XEP80 is far superior to any software-only commercial products that produce an 80-column display.

Compatible Software

According to John Skruch, Atari's Associate Director for Software, AtariWriter 80 -- a new 80-column upgrade of the AtariWriter Plus word processor -- was undergoing final testing at deadline and should also be in the stores when the XEP80 arrives in June 1987.

AtariWriter 80 and a new 80 column, single density version of Atari's Silent Butler personal finance program will be the first commercial software that runs on the XEP80. However, early prototype versions of the XEP80 box were sent to major publishers of 8-bit software -- such as Batteries Included (EA), Broderbund, XLEnt and OSS -- with the expectation that existing products will soon be updated for 80 columns.

Inexpensive 80-column trade-up prices for users of the existing AtariWriter Plus and Silent Butler will be offered by Atari, according to Skruch. But no prices for the software have been set as of this writing.

USING XEP80

The XEP80 is about the size of a 1030 modem (5 3/8 x 9 1/4 x 1-3/8 inches) and weighs in at two pounds. It can easily fit atop your disk drive. The XEP80 connects to your Atari through either joystick port 1 or 2. An XL/XE RCA-jack video cable carries the signal from the back of the XEP80 to your monitor. (Atari says the XEP80 display will not be satisfactory on a televison set.) Keeping the system running is a small 9-volt power supply, the same power unit used with the 2600 videogame system and the still-awaited Atari 1200-baud moderm. Note: The power supply that came with our prototype XEP80 tended to grow unusually hot.

The XEP80 also includes a parallel printer port that uses the same 25-pin cable as the ST. If you hold down the [SELECT] key when you boot your computer, the XEP80 will serve only as a parallel printer interface -- without turning on

the 80-column display.

UTILITIES AND DEMOS

The disk that comes with the XEP80 contains the AUTORUN.SYS file which installs the handler (which is only about 200 bytes). Commented MAC 65 compatible source code for the handler is also included. Atari's Lane Winner is credited as the main designer of the XEP80 system. The disk also features a number of impressive demonstration programs written in BASIC and assembly language, as well as detailed documentation and utility software for inserting 80 column handler routines into your own programs.

The XEP80 handler introduces several new commands to Atari BASIC. These take the form of XIO statements which:

- Invert the screen colors(default is white text on a black background).
- Enable underlining.
- Produce a blinking curosr.
- Mix double-width or double-height text with standardsize text.
- Mix blinking text (any width or height) with standard text.
- Enable character by character horizontal scrolling with a POSITION statement and an XIO statement.

The XEP80 is immediately compatible with all software that supports E: calls -- such as Atari BASIC (versions A, B and C) and Atari DOS 2.5. During our tests, the XEP80 didn't work with DOS 2.0.

GRAPHICS

Built into the XEP80 is 8K of static RAM, which is used as a screen storage buffer to operate the display faster. The XEP80 has two complete character sets built in, the standard XL/XE special character set and Atari's international character set.

The XEP80 can draw high resolution bit mapped graphics covering as much as half the screen.

However, the 80-column drawing routines are much slower than standard 40 column drawing. It took five minutes to draw and fill a golfball-sized circle in Graphics 8. Drawing isn't simple either. The PLOT and DRAWTO statements are not supported and text windows are not allowed. If your program crashes in the middle of one of these lengthy and complicated bit-map operations, the display remains in bit-mapped mode. You must reboot and start again.

If you're serious about an 80 column display, the XEP80 won't disappoint you. The text is outstanding on monochrome monitors and acceptably readable on composite color monitors. Beginning and intermediate BASIC programmers will want to explore new ways to use the XEP80's additional XIO commands. Advanced BASIC and assembly language programmers will enjoy adapting the XEP80 handler to their favorite business software, word processor or telecom-

Avatex 1200 Modification.
ADDING A SPEAKER
by John Purbick

OK, first thing to do is remove the cover from your Avatex 1200. Take out 3 Phillips screws from the underside, 2 near the front and one at the back.

If you're feeling intrepid, orient the modem so the front faces you. Look to the left of the three control buttons; there will be five resistors there, side by side. The leftmost one is labeled "R21". It is the series resistor for the MC light, and we will use it to obtain a signal with which to switch the sound apparatus. Note that at the end pf R21, farthest from the front of the modem, there is an area of metallization on the board which connects both R21 and its neighbor.

Get a small PNP transistor (2N2907 or 2N3906 are cheap and work fine). Make a short (.1 inch) bend in the end of the emmiter lead and lay this part of the lead onto the above mentioned metallized area. Solder it in place. Now bend the base of the transistor slightly toward you. Using a similar technique to the one used for the emmiter,clip one wire of a 3.3K resistor to .5 inch length, and solder it to the other end of R21. Clip the other end of the resistor short, and cross it over the transistor base. Solder them together. Now when current flows through R21, it will also pass through the 3.3K resistor and the emmiter-base junction of the transistor, turning it on.

There are three more connections to make. Look at the far left-hand corner of the board. Next to the transformer (red, in a metal frame) is a blue block, the relay. To the right of the relay is a large capacitor, a resistor, and two small diodes, D35 and D36. Using fine wires, solder two leads onto the ends of D35 and D36 closest to you. Work quickly,so as not to overheat these componants. Don't let excess solder bridge between the diodes or to anything else. The last connection is a ground lead, and can go to any number of places, but one sure connection point is the center lead of one of the voltage regulators these sit on heat sinks at the right hand side of the board. Again,don't cook the regulator while soldering.

Finally,bring in the switched power supply to your circuit from the collector of the PBP transistor. And that's it.

Circuit notes: Use as small a speaker as you can find; I used one I got a while ago, and I think it came out of a set of earphones. Don't expect sound quality to be very good, but you should hear the busy signal and sound of dialing quite clearly, and also the roaring sound of the carrier.

before the connection is established. You can test the setup by dialing your own number (always busy) or 1-(your number), which gives you a boop-bup-beep and recorded sorrow ("We are unable to complete your call..."). All of the components except the resistors should be easily available. You can substitute other op-amps, but the TL062 is a FET-input type that operates on a 5v supply-not many op-amps will do this. (The TL062 is a dual op-amp that is compatible with the quad TL064;it can be substituted without circuit changes

Note that the output is clipped to .6v from ground by the two IN914's on the output. This is necessary because the tones used in dialing sound extremely loud if played at the same volume as received signals (because they've just started their journey). The diodes limit the volume of these tones while allowing as much gain as possible for the other sounds.

Mounting: look at the way the pushbuttons are mounted inside the modem. They fit inside a metal frame, and this has "ears" at each side, with a hole in each. You can cut a long,narrow piece of perfboard which will fit vertically, across the front of the modem, and bolt it to these two holes for support. I used this arrangement, the board being .6 inches by 4.9 inches. Naturally,there must be a large cutout in the board to clear the switches, but there is plenty of space left over for the circuit. My speaker hangs off the left hand end of the board, and I drilled a 3/16 diameter hole in the modem case to let the sound out; this works well because the speaker is just behind the hole, near the cases left front corner.

It would be possible, but not as easy, to run the device off the 12v supply which would allow more output power to the speaker. You can also connect the output to an external amplifier, which I have tried successfully.

Postscript: Harry Steele, Boston Computer Society Atari sysop, came over to my house to see (and hear) the converted modem, and he pointed out that the audio signal is available at pin 1 of chip U27 on the modem board. Picking it up there, rather than at D35/D36 would give a simpler circuit, and I intend to try this, but the circuit as decribed certainly works. Also, one limitation in the circuit - I claimed that it reproduced the busy signal well, but that's because I tested it by calling my own number. In fact, the busy signal comes in very faintly from everywhere except my own number, presumeably because of losses in tranmission. It's audible, though.

Here's an article from:

CAPITOL DISTRICT ATARI COMPUTER ENTHUSIASTS
APRIL 1987 NEWSLETTER
POST OFFICE BOX 2216
ALBANY NY 12220
BBS (518) 237-1232

I thought you all would find of interest, Stan.

DATABASE DESIGN PROCEDURES PART I

BY ROD LEMON

When creating any serious database regardless of whether it will be used to run a large inventory system for a manufacturing concern or for a small stamp collection should follow the same procedures. Of course the scope of each procedure may be different but none the less each must be followed to insure correct, timely, and meaningful ways to get to your specified data. In this case, we are going to develop a in-depth database on the members of our organization. But remember, the steps taken here are pretty much the same when creating any database.

Database design can be broken into three fundamental and basic parts.

They are:

1. Analysis,
2. Specification Writing,
3. Actual Execution and Implementation of Database.

Before getting into the actual design and execution of "CDACE87", we will start off with a perspective of each basic part.

ANALYSIS: One of the things to remember is to do the job right the first time. We all know that that is virtually impossible, but so long as our basic overall concept is correct, any errors that show up down the road should be easily taken care of. So planning a DBMS is just as important, if not more, as actually writing of the system. As a matter of fact, the first thing you should do is to turn off the computer! A caveat to good DBMS planning is to develop a system that is "User Friendly". No system, not even one that was programmed by a genius, is any good if it is not:

1. easy to use,
2. pleasing to the eye, and
3. outputs meaningful information.

By easy to use, we mean that the "end user" doesn't have to remember various commands to run the system. Quite often, MENU base systems are preferred. The operator simply has to move the cursor the desired command and press return or type in the corresponding letter of number.

This is opposed to COMMAND based systems where the operator types in a series of commands to get the system to do something. While in some instances, the

latter can prove to be quicker and more efficient, remembering command sequences, especially complex ones, is fraught with hazards (like forgetting, doing the wrong thing - which could damage the files, etc.) even if the operator is only away from the DBMS system for few days. MENUs, on the other hand, can have very complex command sets imbedded within in them and upon debugging will work right every time.

Another item to remember is that the system should and in a lot of instances, has to be pleasing in appearance. All to often, a programmer will forget that the "end user" will using the system and not he and as a result will develop menus that after long periods of use will put strain on the operator. This can and often does lead to data input errors. As a rule of thumb, menus should be:

1. uncluttered,
2. easy to understand and use
3. interesting to look at without being gaudy

Most of us starting out developing DBMS systems usually end up having too few menus. We try, for instance, to have every piece of data going into the system on one entry screen. This is very bad from two standpoints. The first is just plain bad programming, especially where more than (10) fields constitute the entire database. Information is group and not linear. For an example, in the system that we will be designing, information is group into four main areas:

1. Name and address (including phone numbers) which we will call the CORE elements.
2. Member history.
3. Hardware usage.
4. Software usage.

For each group of information, there should be a screen. The operator will then be able to follow along as the data is inputted into the system. This keeps the DEMO at least partially interested in what they are doing and results in less fatigue. Also, it is very important break large chunks of data up into logical units and assign separate files to them. This will allow for easier access to specific parts of records for various types of output.

The last two items that a menu should be are that each menu should be concise in what it does and good to look at without over doing it. Each choice on a menu and each data field should have a detailed header or explanation of what it is and does. Help screens are a hot item now that memory constraint are no longer a prime consideration with the 520ST and 1040ST and even the 130XE.

The last criteria in screen formats is a judgement call at best, but it is widely accepted that where color is available - use it! That's not to say to use every color in the rainbow, but keeping within good sense (such as dark background, light foreground, staying with only a few colors, etc.) can make a screen very attractive and interesting to look at.

SPECIFICATIONS: With those concepts in mind, it is now time to write it all down. Again this requires planning. Three type of paper are of a lot of help in this stage of design. They are:

1. Workstation Display Format Chart,
2. Line Printer Spacing Chart,
3. Graph Paper.

Essentially, all are a form of graph paper formatted in a specific manner. A workstation display format chart has (80) columns across by (24) rows down which typically is the same as a monitor. The line printer spacing chart is similar to the first form on our list except that it has (132) columns across by (60) rows down. Both are used in the same manner that you write down on them how your input, edit, and menu screens want to appear and how the various reports are to be formatted. When the time comes to actually program the system, these forms will prove quite useful (no guess work). Normal graph paper is the third form we will be using. On it, we will list the various data elements (variables) of each file, box it, and then draw lines to the other boxes (files) to set up relational connections.

- THIS IS EXTREMELY IMPORTANT!

IMPLEMENTATION:

Finally, after files are created, menu and input screens masked, and reports are formatted, it's time to implement the system. Since there will be existing data from the old DBMS that will also be included in the new one, it stands only to reason that instead of typing it all in again that we should copy it over to the new files.

In the business world, data from old systems is still very important and more often than not is carried over to the new system. To insure data integrity and performance of the new system, the old and new run parallel for a period of between four and six months. After that, the old system is brought off line. However, fear not, because some dumb salesman just walked in to the office with newer and more powerful hardware, and the cycle starts all over again. In the computer world, there's always a better mouse trap. Next month we will begin on our actual CDACE87 DBMS, following the steps described before you.

PARALLEL DEVICE BUS FOR ATARI

Proposal for Parallel Device Bus for Atari Personal Computer Type 600/800 XL and 130 XE -or- The Next Generation of Atari's 8-Bit Computer

by Michael T. Davis

We are all aware of the popularity of both the Apple IIe and the IBM Personal Computer (PC). A great deal of this popularity is due to the degree of expandability of these systems. This was once a quality of the Atari 8-bit line, with the Atari 800 and, to some degree, the Atari 400. With the advent of the 600/800 XL and later, the 130 XE, it became much harder to expand an Atari computer. Third-party manufacturers have only now started introducing peripherals for the "Parallel Bus Interface" (PBI) on the XL machines and the "Enhanced Cartridge Interface" (ECI) on the XE, but these devices use what is known as a "closed architecture"; that is, there is no way to readily expand these devices.

ICD's "Multi-Input/Output" (MIO) device is a step in the right direction, but to expand the RAM in this device, a user must send it in to ICD, as the RAM chips are socketed directly to the printed circuit board (PCB). These chips are supposedly a variation of the "standard" RAM chip, so they aren't readily available to the general user. Furthermore, the MIO does not extend the PBI/ECI beyond itself...it's a "dead end", so to speak.

What I propose is a system that, when connected through the PBI/ECI, adds up to eight slots to the system. By utilizing the built-in Generic Parallel Device Handler (GPDH), each of these slots will be addressed as a separate device. This handler can handle up to eight unique devices, so eight slots is a natural configuration. Using this setup, each slot would carry the usual address and data lines, but also interrupt and device select lines, specific for each slot. All of these lines would be decoded by a buffered interface that lies between the "slot board" (for lack of a better term) and the computer. Among other lines (i.e. address, data, etc.), this interface will decode the interrupt line (IRQ), the device select (DEVSEL) and various other lines used by a parallel device. But the idea is to get slots for peripheral PCBs...

Think of the possibilities of having slots on an 8-bit Atari: cardbased hard disks, REAL RAMdisks (as implemented in ICD's MIO), TRUE serial (MODEM) and parallel (printer) ports, parallel floppy drive controllers, video controllers, voice synthesizers, etc. Almost anything you can stick in a PC, you would be able to stick in the "slot board".

Of course, as with any idea, there are potential problems. One of the most serious would

be third-party support. The makers of the Prometheus MODEM have been quite good at supporting the Apple and the IBM, but there's a big difference (read: market share difference) between an Atari and an Apple. Another problem, more related to the equipment itself, is that all of these interfaces are going to produce a large amount of RF interference. To this end, it would be a good idea to get everything in one case. An IBM-type motherboard case would do quite nicely, with enough room for up to four disk drives (floppy and/or hard). The advantage of using an IBM-type case is that almost all of them are made out of metal, and they would make excellent RF cages.

Naturally, the easiest way to get this done would be to have Atari market it. They could then define the entry level system as the 130 XE, and the expert system as the 190 (?) XE. (Why not use the unused bit on PORTB of the PIA, right?) This expert system would have a separate keyboard, and a system unit. The monitor, as with any personal computer, would be optional. The system would also include one disk drive with a floppy controller board in one slot (which could handle up to eight drives: four internal and four external). The motherboard should be modified to automatically handle a truly parallel printer port, and the Operating System (OS) should also be likewise modified. The OS should also be modified to automatically recognize the extra RAM as a RAMdisk, unless a flag byte is (not) set (presumably by an AUTORUN.SYS file). The keyboard should also be enhanced: Besides the present keyboard, 20 function keys, dedicated cursor control keys and a keypad (preferably with four PF keys, for easy VT terminal emulation) should be added. All of these keys, with the exception of the keypad, would generate keystrokes that can already be generated by the current keyboard. Ten of the function keys will produce the same hardware keyboard code as pressing <Control> and a number key. The other ten will produce the codes usually interpretted as a <Shift>-<Control>- [Number key] keystroke.

In this way, such programs as Keith Ledbetter's "SuperKey" will still be compatible with the machine. The keypad and PF keys should generate codes that are loaded into a 128-byte RAM buffer (installed somewhere in the I/O region of the OS) from ROM during Cold-Start. This way, if the user needs to modify the codes generated, (s)he can merely change the buffer, without having to sacrifice user memory. And of course the cursor control keys should merely produce the usual <Control>-<Cursor direction> keystroke.

There should also be four additional keys, which produce the same keystrokes as the now discontinued 1200XL function keys. These four keys should be grouped into the same area of the keyboard as the cursor control keys, since they are, for the most part, editing keys.

Well, this started out as a description of a comparitively simple addition to a computer, and turned into a definition for an entire computer. Either of these proposals would be fine, but of course, most users would prefer the latter suggestion, since it doesn't involve so many separate pieces of hardware sitting out on his (her) desk. Lately, there have been some major concerns raised about the future of the Atari 8-bit line. If the Atari computer should survive into the next few years as a sellable product, it will only be through some such enhancement to the computer as has been described (including an altogether improvement to the computer system, itself). It would surely be a sorry day for many computer users if Atari decides to abandon its 8-bit users. Let's all hope the 8-bit Atari user will live on for a long time to come.

ED NOTE:

This would be just what the Atari 8-bit needs to step up into the world of respected computers in the eyes of the software makers. But as we all know Atari would never take the time to look at it. Shame.

L..A.C.E. Technical Assistance ..USING THE KV-1311CR SONY TV/MONITOR WITH THE ATARI 520ST..

By:Henry Katzmarek

Since having uploaded my last article I have had numerous questions regarding making a passive interface hinted at in the description instead of the active one described. (A passive interface requires no components that need power). This article will attempt to describe how to hook-up the KV-1311CR Sony monitor to the Atari 520ST with all passive components.

Before I start the description, I want to remind you that you are making the interface at your own risk! I have made the interface myself and it is currently working just fine on my own computer; however, I cannot vouch for any problems due to changes in the computer and/or monitor, or omissions I might make in this article. In any case, I would appreciate any feedback so I might update this article as needed.

Also, two related notes. The circular DIN connectors you might need for this and related projects are available from:

Alpha Products, Inc.
5740 Corsa Ave., #104
Westlake Village, CA
91362

Telephone: (818)889-9304

Alpha products has both plugs and jacks of the 13 and 14 pin DIN variety.

The second point I wish to make is that I have received a message from Mark Sloatman of Prac. Sol. on Compuserve, his ID is 74206,356. Mark tells me he currently has available for sale cables to connect your Sony KV-1311CR to your Atari. So if you don't mind spending a few bucks and/or are not electrically inclined, you may wish to check out this source rather than proceeding on building your own cable.

First, I wish to define the pinout present on both my Atari 520ST and my Sony KV-1311CR monitor, as a number of people have stated they have different signals on different pins.

Atari 520ST Monitor Connector

Pin	Signal Name
1	Audio Out
2	Reserved
3	General Purpose Output
4	Monochrome Detect
5	Audio In
6	Green
7	Red
8	Ground
9	Horizontal Sync
10	Blue
11	Monochrome
12	Vertical Sync
13	Ground

Sony KV-1311CR Monitor Analog RGB Input:

Pin	Signal Name
1-3	Not in use
4	Ground
5	Not in use
6-16	Ground
17-22	Not in use
23	Composite video output
24	Audio input
25	Red input
26	Green input
27	Blue input
28	Not in use
29	Fast blanking input
30	Composite sync input
31,32	Not in use
33	RGB/Normal mode select
34	Audio select

During this description I will refer to the pin and signal name as described here, you can judge whether yours is the same or not.

The parts you will need are as follows:

1-470 ohm resistor, 1/4 watt or higher, 5%, quantity-2
2-general purpose diode, 1N4001 or equivalent, quantity-2
3-connector for analog RGB input on your sony monitor
4-connector, male, DIN 13 pin for your computer
5-wire, solder, etc for making the actual cable

Parts 1, 2 and 5 can be bought at almost any electronics place, Radio Shack, etc. Part number 3 I am not sure of a good source, I know AMP makes the appropriate connector. Part number 4 can be obtained from Alpha Products.

Actual Description of Wiring Follows:

CONT. ON NEXT PAGE

Atari signal/pin	Additional circuitry	Monitor signal/pin
Audio out/1	None	Audio input/24
Monochrome detect/4	None	None (Note: Ground this pin for Monochrome operation only)
Green/6	None	Green input/26 (Note: I did NOT use any dropping resistors in the R,G,B lines)
Red/7	None	Red input/25
Ground/8	None	Ground/4
HorizontalSync/9	---->CR1----->R1	---->Comp. sync in./30
(Note: CR1 is the first of the diodes listed above) (Note: The nonbanded side of CR1 goes to the computer, pin 9) (Note: R1 is the first of the resistors listed above, no polarity)		
Blue/10	None	Blue input/27
Vertical sync/12	----->CR2----->R2	---->Comp. sync in./30
(Note: CR2 is the second of the diodes listed above) (Note: The non-banded side of CR2 goes to the computer, pin 12) (Note: R2 is the second of the resistors listed above, no polarity)		
Ground/13	None	Ground/6
+5 volts DC	None	Fast blanking/29
+5 volts DC	None	Mode select/33
+5 volts DC	None	Audio select/34

Note that I do not have +5 volts DC present on either my monitor or my computer connectors, and yet it is needed for pins 29,33,34 on the monitor. My solution was to install a +5 volts DC voltage regulator (7805 type, Radio Shack) in my monitor and bring the +5 volts DC out on an unused pin, thereby providing me with +5 volts DC as needed.

Newer ST computers may have a +5 VDC output to use for these signals; if not, the decision whether to modify your monitor (voiding warranty) or to use some external source (power supply) is yours.

I would not suggest trying to use a battery as it may wear out at the most inopportune time (Murphy's Law).

Please advise me of any updates and/or corrections to this article, and I will update it as needed. Good luck, and may the force be with you!

Henry Katzmarek
CIS ID#---70735,664
PLINK ID#---OLS606

ATARI 8-BIT ON ST's OK'd

DAREK MIHOCKA's ATARI 800-in-an-ST Program WILL BE RELEASED with ATARI's approvall

By John Nagy

NEIL HARRIS, spokesman for ATARI, has agreed (in a public message on the GEnie ATARI SIG) to allow both USE and DISTRIBUTION of the ATARI code within Darek's emulator.

The permission is contingent on Darek's publishing the source code for his emulator, so that other programmers may be able to add their efforts. Neil says the object of this move is to increase the likelyhood of a truly versatile, full speed emulator.

As it stands now, the ST Transformer uses largely custom routines modeled after the ATARI ROM, with some code grafted into the program at startup by a port of the TRANSLATOR DISK (or, in another version, they are already within the emulator program). That's what ATARI had said that Darek could not legally do.

At the BUFFALO Atarifest in late April, two user groups showed Darek's "ST TRANSFORMER" in operation. The author sent both the GENESEE ATARI GROUP (G.A.G., Flint, Michigan) and the WESTMORELAND ATARI COMPUTER ORGANIZATION (W.A.C.O., North Huntingdon, Pennslyvania) copies of the public domain emulator for demonstration only. Interest at both tables was brisk despite the uncomplete state of the program and the current slowness of execution (20%-40% "normal" speed depending, on the program). ATARI tried to ignore the demos.

WACO members quizzed ATARI reps over the actual status of the TRANSLATOR, which was sent to all registered user groups for free distribution. Sandy first said that it WAS NOT SENT and remained ATARI'S property, then admitted that she didn't know for sure. At issue was what restrictions (if any) can now be put on the uses of the disks after years of free distribution.

An intriguing facet of the conflict appeared when a program called XLFIX, available for sale in ANTIC MAGAZINE's public domain library, was found to work as well or better than the original ATARI disk. There are several other translators and operating systems available (both in the public

domain and commercially - BOSSXL, NEWELL OSN, etc.). It appears that ATARI would first have to legally assert ownership and control of ALL the "translators" in order to get any legal claim against Darek for using one or more of them in his 800 emulator.

The dark prospects of long and possibly unsuccessful legal action, together with petition drives, newsletter editorials, and comments running in most major telecommunication services and magazines - all in support of the ST TRANSFORMER - now seem to have gotten through to ATARI.

In May, Neil Harris went on record as saying that if Darek would only put his program source code in the public domain for further development by other programmers, then ATARI would give their permission for use and distribution of their operating system.

Darek Mihocka was unwilling to release his source code as public domain, for he would then have given up any rights to his efforts. Fortunately, ATARI softened their position, changing their demand to simply the PUBLISHING of the code, with the rights to his work remaining with the author.

Darek had previously contacted several other major ATARI-interest magazines about the possibility of their publishing the TRANSFORMER and source code in copyrightable form, but was turned down by each. The main reason was ATARI's vocal objection to the project and its legal questions. However, Neil stated in his May 15th messages that ANY magazine would be satisfactory, and that a formal proposal letter of permission would be sent within days. Richard Frick of ATARI called to confirm this on May 20.

Darek will have the consent needed for any interested magazine to publish and distribute the ATARI ROM with the emulator, as well as any parts of DOS and BASIC that may help. Availability time, publishing timetable, and even which magazine will offer the program can only be guessed at. It is clear that wherever it is printed, ATARI wants no restrictions on distribution (i.e., ANTIC and its "no BBS" rule). Frick indicated that ATARI could influence ANTIC on this issue for this particular program if neccessary.

All the flap hasn't slowed Darek's progress on the continuously developing

project. He added SOUND, GTIA graphics, DOS MENUS, JOYSTICK CONTROL, and yes, PLAYER-MISSLE graphics to the already fairly capable emulator. The PLAYER-MISSLE routines were completed and donated by another sympathetic programmer. Speed improvements continue to be made.

Throughout the months of discussion on the subject, Neil Harris and company at ATARI kept asking "Why would anyone want to use 8-bit software on an ST?"... Perhaps a much better question is "WHY NOT?". WACO and other user groups WANT an emulator to provide SOME kind of link, however flawed, between the two products of ATARI CORP.

Distribution of a successful emulator disk by ST dealers might be all some 8-bit owners need to convince them that it is time for a system upgrade- or at least assure them that an upgrade in hardware won't mean an instant loss of 100% of the software they have grown with for years.

Supplied by the CHAOS BBS (517) 371-1106

Hmm Synfile or ...?????

1987 CEBIT Report

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What is CEBIT?

The CEBIT fair at Hanover supposedly is the world's largest show in bureau and information electronics. CEBIT stands for: Computer, Electronics, Bureau, Information and Telecommunication. On an area of more than 205,000 square meters in 12 halls more than 2200 firms showed their products.

This year's show had snowstorms causing chaotic traffic situations so even the usually reliable Bundesbahn (federal train service) had delays of up to 6 hours. For this reason the show was nicknamed 'Schnee-BIT' (Schnee is German for snow). But anyway, though we arrived late, we finally got there and it became a very interesting day.

HARDWARE...

ATARI presented itself in its newly adopted white-and-blue look and on 50 1040s the software-houses presented their new products.

Before looking at the software I was pulled to the new MEGA-STs and that experience was great. The design was appealing and the keyboard a lot better than my 1040's. Helas, the MEGAs won't hit the stores before May or even June due to a slight timing problem with the shifter-chip.

This error results in small vertical black lines on the display. The delay in the MEGAs will probably also affect the PC since ATARI said they would only put out the PC after the MEGAs to show their preferences. But with Jack Tramiel one never can be certain. The last all new product was the laser printer. Connected to one of the MEGAs it was turning out page after page.

The quality was as can be expected from such a machine. The printer emulates a Diablo 630 and supports GDOS. According to a German ATARI representative they are working on post- script.

Naturally ATARI was not the only to show new products. On the hardware side there was also HEISE, a German publishing-house, that showed its new version of the real-time language PEARL/RTOS system which was developed at Hanover university. It was simultaneously showing a graphic (a more sophisticated version of the only too well known jumping-ball) and controlling a robot that balanced a glass of water.

BASIS-O, who formerly built APPLE compatibles, showed an interesting new integrated scanner-printer/plotter and telecopier. Within 4 minutes it is possible to send or receive a letter in handwriting or with graphics on any public or private telephone. The device incorporates an acoustic coupler and can be run on rechargeable batteries. The resolution is at 4096 pixels per line and 1125 lines per page.

PRINT-TECHNIK presented its 3rd-generation digitizers. Their new Realtizer digitizes a picture with up to 16 graylevels in less than one second. It now plugs into the ROM port. Its big brother, the PRO 87, digitizes 1024 pixels in 512 lines and 128 graylevels. Both digitizers come with a toolbox-software and the PRO 87 also includes the necessary hardware for real color images.

PRINT-TECHNIK also offers a Genlock interface for the ST. Other products are a Meteosat weather satellite receiver, a sound digitizer and a memory-oscilloscope. GTI, a Berlin-based society, presented a VMEbus-interface that plugs into the DMA-port and includes a full bus-arbitration-logic and supports interrupts. The DMA-port is pulled through so that a hard-disk can still be used.

Another bus that opens your ATARI ST is produced by RHOTRON. It is plugged onto the CPU and has eight slots. Since installing the bus voids the warranty. RHOTRON also offers a PC-like case in which the ST and the bus and a stronger power supply are incorporated.

Rhotron offers several cards to fill the slots, from 2-Meg RAM to multifunction cards, they have just about everything, or how about a math-coprocessor?

A barcode-reader can be obtained from CDS in Freiburg/Rhine valley. Barcodes invade our lives, they tell you what is in a specific product, which film you just rented and with such a reader you can find out yourself.

LINDY, a maker of printer cables and other computer add-ons also presented an oscillograph. It can be used as a sound-sampler or as a digital oscilloscope.

The last interesting hardware I wish to present was not on the show, but since Desktop Publishing is becoming more and more important, I feel it should be mentionned.

HEIM-Verlag, another young publishing house, that was the first in Germany to have a magazine purely dedicated to the ST-line (ST computer-mag), offered a program and interface to connect an ST to a CompuGraphic -MCS -layout station called 'transmit'. They use it to make their magazine. And as far as I can tell it seems to work pretty well.

Let's start with new languages. Although there are many already, even more languages are offered for the ST. Some people even say that there is no other computer with more different languages available -- languages not only for developers.

Again, HEIM-Verlag has something for us. It is a powerful version of PROLOG that also supports GEM. The package consists of a compiler/ interpreter system with around 140 functions. It is called SALIX-PROLOG and costs around $120.

More sophisticated is MProlog by Berlin-based Epsilon. MProlog is also available on other computers like VAX, Macintosh, IBM etc. It costs around $500 (?), and is designed for professional use.

SMALLTALK-80 in its version 2.1, which has been ported to the ST by a group from Dortmund-university, is an object-oriented language which means that all is done by sending messages betwwen objects.

Another language with an unusual concept is FORTH. LMI put out its FORTH-83 compatible version for the ST. This version is also compatible with other LMI-Forths for other computers. Alas, it does not support GEM, but it at least supports the TOS functions. A language that becomes more and more interesting for the hobbyist is MODULA-2. MEGAMAX is turning out its version and probably will be a worthy competitor against TDI.

Not only new languages were shown. BASIC in new and more powerful versions enjoys a glorious revival. Three different BASIC systems were shown.

First there was GfA who showed version 2.0 of their interpreter and the almost final version 1.71 of their compiler. Frank Ostrowski, the author of

GfA-BASIC is now busy writing a GFA-macro-assembler, lets wait and see. GFA will be represented in the US by MICHTRON.

The second BASIC shown was OMIKRON-BASIC which comes on a plug-in board for the ROM-port. It is even faster than GFA-BASIC in most functions, it calculates up to 19 decimals, supports matrices and a C-standard GEM interface. It is MBASIC-compatible and there is only one problem. By the time it was published, most people had already bought GfA-BASIC.

The third newcomer has another nice feature. True-BASIC is available for ATARI, IBM, AMIGA and MAC and between these it is fully portable. Like OMIKRON it offers matrices and it supports the full new ANSI-standard. It also has a special library for 3-D graphics.

BUSINESS...

Those that are useful for any businessman was LOGISTIX, an integrated software-package which includes a spreadsheet, database, timeplanner and graphics. The demonstration was quite impressive, and the product seems very capable, but I'm not an expert in spreadsheets.

Another database was presented by ATARI itself. ADIMENS-ST is fully GEM-integrated (well almost), extremly fast, powerful and a high-quality product. To bad it still lacks a programming language, which for me as a developer is indispensable. ATARI said it is underway, though, and should be available by July.

A real goody was a piece of integrated software which was presented by a Yugoslavian firm. Its name is 'STEVE' and it is the most flexible spreadsheet I've seen, yet. One can do everything and nothing with it. It can be used as a spreadsheet naturally, a database, text-editor, graphic editor and mailing list facility. It allows user-definable function keys, two keyboard-tables, several fonts, abbreviations and dictionary in the text-editor and more. The program will retail in Germany for around DM 250, which is about $110, but that was the maximum price. I'm waiting for this program!

Again, ATARI offered '1st Word Plus'. This program cures most of the errors and oddities of the original 1st Word and adds some nice new features as well. It is going to be really difficult to make a choice between 1st Word Plus and BECKER-text since both have nice features the competitor does not have and as well there are still wishes I have for both.

TOOLS

G-DATA, based in Dusseldorf, has been known over here for its quality utility software. They have improved some of their old programs and added new ones including a program to make a Hard disk capable of

auto- booting and several programs to make backups of a hard disk which has some nice features including data-compression, and file size of more than disk size.

The most powerful tool for disk-repair and editing is T.L.D.U. by FOCUS. This firm has made disk-monitors for years. T.L.D.U is fully programmable and the disk comes with some example-macros which offer a good way to learn the necessary commands. The programming language is very C-like. The current release does not read or write some copy-protected disks, but an update has been promised for June. T.L.D.U. also includes a disassembler and an extensive manual.

KUMA presented its late releases of K-Switch and K-Resource.

Finally there is some movement in the German mailbox and telecommunication community. Some good programs were at the show. DELUXE-Term supports GEM and is somewhat equal in comfort to FLASH, but it is possible to use 1200/75 baud which is necessary for BILD-SCHIRMTEXT, the German version of Video-TEXT services. Another program, again offered by ATARI themselves, is 1st Terminal, that is completely GEM-based in conjunction with PROFIBOX, an excellent mailbox program. It is even possible to select from the PROFIBOX menues using your mouse when utilizing 1st Terminal.

Both programs, the box and the terminal program have been written by Brain-Works from Rosenheim in Bavaria.

Harm-Bastian (HABA), which resides in Hamburg, has released its HABACAD-PL layout program. The program addresses only professional hardware-developers and the price of DM3000 ($1200) seems rather hefty.

On the lower end of the price scale is STAD a drawing-program for 2-D and 3-D objects. There are up to 15 2-D pages and an extra 3-D part. STAD offers the usual and some extra functions including sending/receiving via the serial port. The 3-D part is object-oriented like in EASY-DRAW, the 2-D part is not. STAD also includes animation and 'realtime rotation'. DM 179.-($90).

FINISHING UP

A program I could not classify, but which I found a very appealing is 'SKYPLOT plus'. Just about anything that has to do with astronomy is in this program. Calculate eclipses, conjunctions, trails of selected comets or planets and stars. Two databases for the stars, one with 610 and one with 15,383 stars are integrated. It is possible to find out how the night -sky above your house looks like, by putting in your geographical position. This program has much more possibilities. It retails for DM 200,- ($100).

Atari has sold over 120,000 STs (all models) in Germany alone.

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